AGENCY CONSTRUCTION CORP.

CONTRACT NO. V526C-466 **VABCA-4559 & 4560**

VA MEDICAL CENTER
BRONX, NEW YORK

Lee S. Wiederkehr, Esq., Farley, Jutkowitz, Balint & Wiederkehr, Yonkers, New York, for the Appellant.

Merilee Rosenberg, Esq., Trial Attorney, ***Phillip S. Kauffman, Esq***., Deputy Assistant General Counsel, and ***Phillipa L. Anderson, Esq.,*** Assistant General Counsel, Washington, D.C., for the Department of Veterans Affairs.

OPINION BY ADMINISTRATIVE JUDGE KREMPASKY

Respondent, Department of Veterans Affairs ("VA" or "Government") has moved for summary judgment on the appeals of Appellant, Agency Construction Corporation ("ACC" or "Contractor"), in VABCA Nos. 4559 and 4560. ACC has cross moved for summary judgment in both appeals. These appeals deal with alleged changes to Contract No. V526C-466 ("Contract") for the construction of a therapeutic pool building at the Department of Veterans Affairs Medical Center in the Bronx, New York ("VAMC Bronx").

The appeal in VABCA No. 4559 involves the VA's alleged constructive change to the Contract increasing the thickness of insulation required to be installed as part of the roof structure of the therapeutic pool building. ACC asserts that it is entitled to an equitable adjustment of $28,431 for the cost of installing insulation with an R value in excess of the R 13.2 insulation that ACC asserts the Contract permitted it to install. The VA takes the position that, by reading the drawings and specifications together, the Contract requires the installation of insulation with a minimum thickness of 6 1/2" having an R value in excess of 13.2.

The appeal in VABCA No. 4560 involves an alleged change to the Contract occasioned by the VA's refusal to approve a clamp ACC proposed for use in the suspended ceiling support system in the therapeutic pool building. ACC has averred that it is entitled to an equitable adjustment in the amount of $7,044.31 because of the additional costs of procuring and installing the clamps it was directed to use by the Contracting Officer ("CO"). The VA asserts that it was entitled, as a matter of law, to direct ACC to utilize the particular type of clamp at no increase in the Contract price. ACC has responded by averring that the clamp it proposed for use met the Contract requirements, that the clamp it was directed to use did not meet the Contract requirements, and, that the clamp it was directed to use was more expensive than the clamp it proposed for use.

The parties, in their cross motions, each assert that there are no material facts in dispute and that, as a matter of law, each is entitled to a judgment in its favor.

The record before the Board consists of the consolidated Complaint and Answer in these appeals, cited as "Cmplnt. ¶ __" or "Answr. ¶ __"); the separate Appeal Files for each appeal: the Appeal File in VABCA No. 4559 (cited as "4559 R4, tab __") consists of 22 exhibits, the Appeal File in VABCA No. 4560 (cited as "4560 R4, tab __") consists of 28 exhibits; the VA's MOTION FOR SUMMARY JUDGMENT which includes five supporting exhibits (cited as "MSJ Exh. _"); ACC's CROSS MOTION FOR SUMMARY JUDGMENT which includes 11 supporting attachments (cited as "CMSJ Exh. _"); the VA's REPLY TO APPELLANTS CROSS MOTION FOR SUMMARY JUDGMENT; ACC's REPLY TO RESPONDENT'S MOTION FOR SUMMARY JUDGMENT AND REPLY; and, the parties' responses to the Board's ORDER FOR ADDITIONAL BRIEFING which consist of a declaration submitted by each party (cited as "Govt. OAB Rspnse." or "App. OAB Rspnse.").

FINDINGS OF FACT

General

The following findings of fact are made for the purposes of this decision only and are not in dispute. The Contract was awarded to ACC on August 9, 1993 in the amount of $2,545,848; ACC received the Notice to Proceed with the work on August 24, 1993. Under the Contract terms, the overall completion date was August 24, 1994. (MSJ Exhs. 1, 4)

The Contract (4559 R4, tab 22) includes the standard Federal Acquisition Regulation ("FAR"), 48 C.F.R. Chapter 1, and Department of Veterans Affairs Acquisition Regulation ("VAAR"), 48 C.F.R. Chapter 8, clauses usually found in VA construction contracts, including the following clauses relevant to this appeal:

ORDER OF PRECEDENCE -- SEALED BIDDING, FAR 52.214-29
(JAN 1986) DISPUTES (ALTERNATE I), FAR 52.233-1 (DEC 1991)
MATERIALS AND WORKMANSHIP, FAR 52.236-5 (APR 1984)
SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, FAR 52.236-21 (APR 1984)
SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, VAAR 852.236-71
(APR 1984)
CONTRACT CHANGES, VAAR 852.236-88 (JUN 1987)
SPECIAL NOTES, VAAR 852.236-91 (JAN 1988)
CHANGES, FAR 52.243-4 (AUG 1987)

The specifications and drawings for the Contract were prepared by the VA's Architect-Engineer ("A/E"), William Hall Partnership. The A/E's duties included review of contract submittals and other construction period services such as inspection and response to contractor requests for information. (MSJ, Exh. 2)

VABCA-4559, Roof Insulation

On November 16, 1993, the VA rejected ACC's initial roofing submittal, in part, because ACC did not show the use of insulation of a proper thickness. (MSJ, Exh. 5)

Contract Specification Section 07220, Roof and Deck Insulation, states at Paragraph 3.4 B.:

> 1. Thickness of roof insulation shown on drawings is nominal. Actual thickness shall provide the thermal resistance "R" value of not less than 13.2 for uniform thickness. (average thickness where tapered insulation is used)
> 2. When thickness of insulation to be used is more or less than that shown on the drawings, make adjustments in the alignment and location of roof drains, flashings, gravel stops, facias and similar items at no additional cost to the Government.
> 3. Where tapered insulation is used, the thickness of the insulation at high points and roof edges shall be as shown on the drawings; the thickness at the low point (drains) shall not be less than 1 1/2 inches.
> 4. Use not less than two layers of insulation when insulation is one inch or more in thickness unless specified otherwise.

(4559 R4, tab 22)

Factory tapered cellular glass roof insulation was required under the Contract. The thickness of such insulation for a particular R value varies from manufacturer to manufacturer. (CMSJ, Exh. 1)

Contract Drawing No. 110-A-3, Clerestory Plan and Therapeutic Pool Details, in Detail , Typical Roof System, depicting a cross section of the roof, in two places, shows the insulation as being a minimum 6 1/2" thick. In addition, other contract drawings depicting or referencing the roof insulation all depict 6 1/2" insulation. Underneath Detail on Contract Drawing No. 110-A-3, the following phrase is found: "MINIMUM U_o =0.05." The "U_o" value refers to the thermal transmission characteristics (the time rate of heat flow from the warm side to cold side of the roof system) of the entire roof system consisting of the standard cement and aggregate concrete roof plank, the 3 ply built-up vapor barrier, the roof insulation and EPMD roof membrane. (4559 R4, tabs 15, 22; MSJ Exh. 2; CMSJ Exh. 4)

The "U_o" value of the roof system is calculated by the following equation: $U_o=1/R$ (R is the total thermal resistance values of roof system components). Thus, the combined "R" values of the roof system components depicted in Detail must total 20 to meet the Contract requirement of $U_o=0.05$. When the R values of the roof system components exclusive of insulation are calculated, the required R value of the insulation can be determined. The required R value will determine what thickness of insulation is to be installed. The parties, in response to the Board's ORDER FOR ADDITIONAL BRIEFING, provided the R values for the roof system components to show what insulation thickness was necessary to achieve the U_o =0.05. The parties agreed that an air film above the roof membrane having an R value of .17 should be included in the computation of the total roof component R value. The roof membrane R value was represented as .33 by the Government and .30 by ACC; the difference is *de minimis* and we will utilize the .33 R value as more favorable to ACC. The Government R value for the vapor barrier is .33; the Appellant's vapor barrier R value is .12. The Contract requires a 3 ply (3 felt sheets applied by mopping with hot bitumen) vapor barrier. The

references used by both parties show the R value of a 2 layer vapor barrier as .12. We accept the VA's vapor barrier R value as representative of a 3 layer vapor barrier. The concrete roof plank R value is .22. ACC represented that the R value of the 2 inch roof plank was 1.20; however, this figure is based on a gypsum concrete plank which was not used in the Contract. Thus, we find that the R value of the roof planks is .22 as represented in the standard publications submitted by the parties. ACC also included an R value of .66 for .750 inch built-up roofing in its calculation; built up roofing was not a component of the roof system indicated in Detail of Drawing No. 110-A-3. Based on the above, the combined R value for the roof system, exclusive of insulation, is calculated as follows:

Component	R Value
Air Film	.17
EPMD Membrane	.33
Vapor Barrier	.33
Concrete Roof Planks	.22
Total Roof System	1.05

With the roof system components (except insulation) having a combined R value of 1.05, the R value of the insulation has to equal 18.95 to meet the R 20 requirement. The Government using standard tables and a -30 degree outside temperature rates the insulation required by the Contract as having an R value of 3 per inch of insulation. The standard R rating for the insulation, based on a zero degree outside temperature, is 2.86 per inch of insulation, the insulation R value utilized by ACC. Using the R value of 3, 6.31" of insulation would be required to achieve an R value of 18.95. Using ACC's figures, 6.63 inches of insulation would be required to achieve the total R value of 20 for the roof system. Thus, using commercially available thicknesses of insulation, the 6.31" or 6.63" insulation requirements translates to the 6.5 inches of insulation specified in the Contract. (4559 R4, tabs 15, 22; MSJ Exh. 2; CMSJ Exh. 4; Govt. OAB Rspnse.; App. OAB Rspnse.)

ACC made a series of Contractually required submittals of the roof system components beginning sometime after the Notice to Proceed in April 1993 showing the use of tapered insulation with a minimum thickness of 3 1/2 " and maximum thickness of 5 3/4" having an average R value of 13.02. All of these submittals were rejected by the VA, the last of which was in August 1994. ACC responded to this final rejection, after unsuccessful attempts to have the VA provide a specific roof design because of the alleged "conflicts" in the insulation specifications, by submitting a change proposal in the amount of $28,431 to install insulation with a minimum 6 1/2 " thickness.

(4559 R4, tabs 1, 3, 6, 17; MSJ, Exh. 6)

Subsequent to ACC's December 5, 1994 change proposal, the Contracting Officer ("CO") directed ACC to install 6 1/2" insulation by a final decision, referencing the change proposal, dated December 13, 1994. The Final Decision, while not expressly so stating, clearly incorporates the determination that there would be no increase in the Contract price for the installation of the 6 1/2" insulation, thus rejecting ACC's change proposal. (4559 R4, tab 7)

Based on ACC's roofing subcontractor's quote, the direct additional cost of installing 6 1/2" insulation was $25,094. Adding ACC's profit and overhead costs of $2,509 and bond costs of $828 to the direct cost, the total additional cost to install 6 1/2" insulation was $28,431. (4559 R4, tab 6)

VABCA-4559, Beam Clamps

The Contract required installation of a suspended ceiling. The ceiling was to be installed by attaching "bridging" members to the building's structural steel beams; the hangers for the suspended ceiling would, in turn, be attached to these bridging members. The bridging members were to be attached to the bottom flange of the structural beam by a clamp (also referred to as a clip) affixed to the beam flange and the bridging member flange. (4559 R4, tab 22; 4560 R4, tabs 6, 22; CMSJ, Exh. 1)

Contract specification Section 05170, *Support System For Suspended Ceilings*, in Paragraph 2.1, *Material*, set forth the Contract requirements for the bridging members and clamps as follows:

> A. Bolts:
> 1. A307, 3/8" diameter, with lock washers and nuts. Provide shop coat of asphaltum paint.
>
> B. Bridging:
> 1. 1 1/2" deep x 7/16" wide flanges, 803 lbs. per 1000 linear feet, galvanized. Fabricate from galvanized cold-rolled steel, black asphaltic paint finish. Maximum spacing 4'-6" o.c.
> 2. ASTM 446 for galvanized channels: ASTM A525-G-60 galvanized coating.
>
> C. Clips:
> 1. Galvanized steel.
> 2. Designed to clamp bridging to steel beams.
> 3. Designed to rigidly secure framing members together.

(R4 4559, tab 22)

Also relevant is Contract Specification Section 09500, *Acoustical Ceilings*, Paragraph 3.2.B., *Anchorage to Structure*, which states, in specifying the manner of attachment of bridging members to a steel structure:

> Attach bridging to the bottom flange of steel beams spaced over four feet on center. Weld or use steel clips to attach to beam to develop full strength carrying channels.

(4559 R4, tab 22)

ACC's November 2, 1994 Submittal #251 proposing use of a "C" clamp with locking nut to attach the bridging members to the structural steel was rejected by the VA on November 14, 1994. The VA noted, with regard to the "C" clamp, on the submittal

sketch returned to ACC, that: "This clamp is not designed for this purpose." (4560 R4, tab 2) ACC's proposed clamp, according to manufacturer catalog cuts of the clamp furnished with the submittal, was: "Designed for attaching a hangar rod to the top flange of a bar joist or other structural shapes." (4560 R4, tab 6)

Concurrent with the formal Contract submittals, ACC, beginning in August 1994, had been making inquiries of the VA and its A/E regarding the beam clamps since it appeared that ready made clamps for the C channel bridging member specified were not available. By letter dated November 8, 1994, and reiterated on November 22, 1994, ACC alleged that the Contract specifications for the acoustical ceiling support system were defective because neither the "C" channel bridging member specified nor clamps for attaching the specified "C" channel to the structural steel were "commercially available." (4560 R4, tabs 3, 5)

In addition to the formal submittals and communications to the VA, ACC had a series of correspondence in November 1994 with the project manager for the VA's A/E, Mr. DeFlippo, informally providing and seeking information on the ceiling support system. Part of this correspondence included a November 11, 1994 transmission from Mr. DeFlippo to ACC providing a beam clamp detail showing a bolted clamp affixing the bridging member to the structural beam flange. (4560 R4, tabs 20, 21, 23, 25, 27)

At a job meeting on December 1, 1994, Mr. DeFlippo provided a sample of a "Kindorff" beam clamp to ACC as an acceptable clamp. When shown the clamp, ACC's representative simply asserted that the clamp would not work.

(4560 R4, tab 17)

On December 8, 1994, ACC submitted a change proposal for use of the Kindorff clamp. This change proposal was revised on December 20, 1994 to a new total of $7,044.31. This total was based on ACC's subcontractor's quote which included the use of the Kindorff channels and clamps for the bridging members instead of the "C" clamps and channel originally proposed by ACC. (4560 R4, tab 12)

> In a December 15, 1994 letter to the VA, Mr. DeFlippo stated with regard to the beam clamps submitted by ACC:
>
> The clamp was disapproved because the type of clamp submitted was not designed for the purpose the Contractor has intended it for.
>
> * * * *
>
> The Contractor has since submitted information that has not been any different than information that he has previously submitted. These submittals are #248A and #248B - "Disapproved" 12-12-94. These submittals are of the proposed C-Channel. They have been disapproved because the size used was not mentioned.
>
> * * * *
>
> No clamp has been approved. We have suggested a clamp, manufactured by Kindorff, but the Contractor has said that it

> will not work. He has not submitted anything better to date.
>
> * * * *
>
> Our own research has turned up no clamp that is made to do exactly what we want. The hardware representatives that we have spoken to have all sent data back for 9" "Kindorff" type clamps. The cost per clamp is $2.00 to 3.50 each.

Mr. DeFlippo also noted in the letter that he had contacted a hardware manufacturer who had indicated that it could make a custom clamp and deliver it for the same price and within the same time as an off-the-shelf clamp.

(4560 R4, tab 10)

Mr. DeFlippo rejected the ACC clamp because, in addition to the fact it was not designed by the manufacturer for use for attaching bridging members to the structural beams, the "C" clamp would permit the bridging members to twist and rotate which could, in turn, result in the collapse of the su